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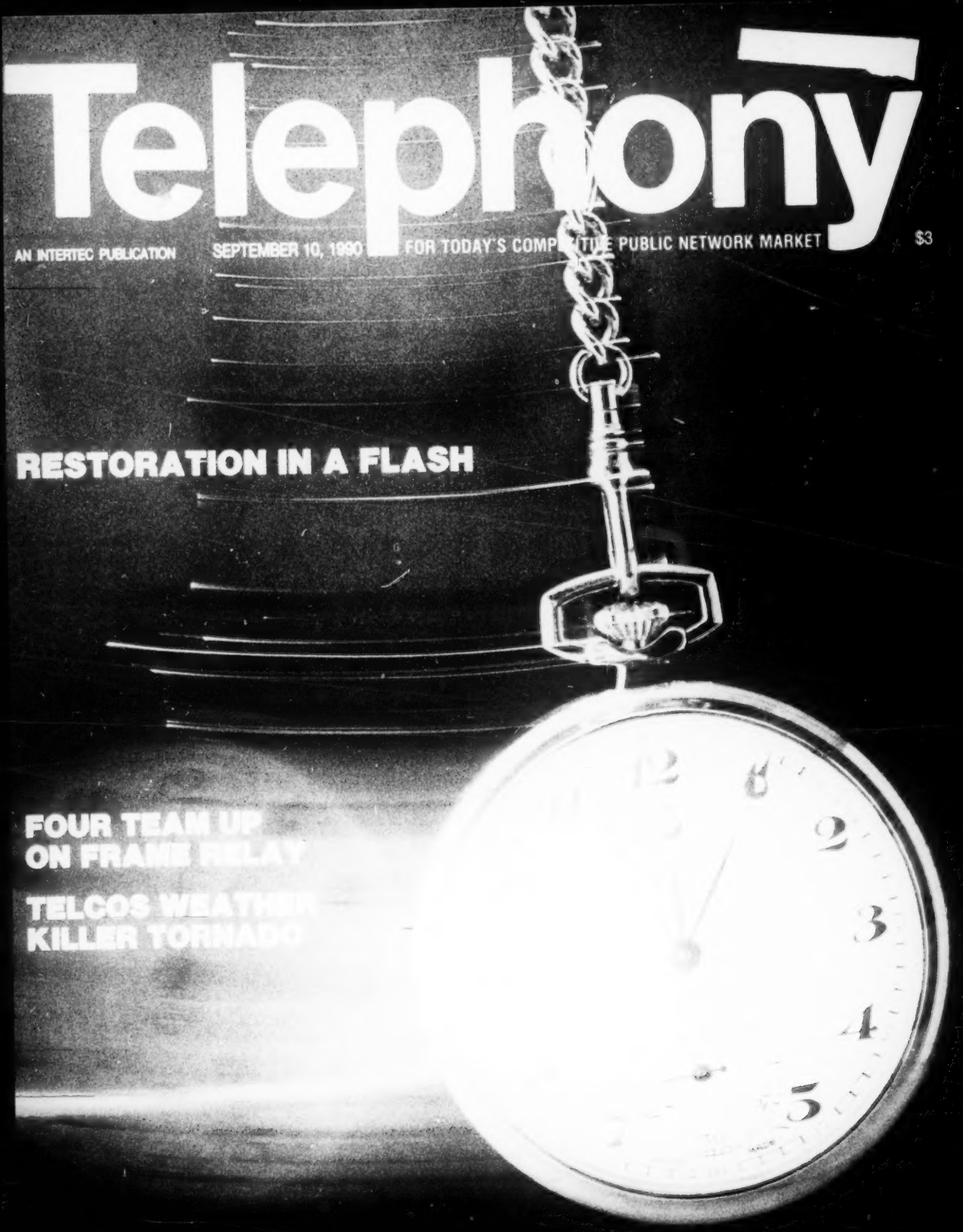

RESTORATION IN A FLASH

FOUR TEAM UP ON FRAME RELAY

TELCOS WEATHER KILLER TORNADO

MONDAY, SEPTEMBER 10, 1990 Volume 219, No. 12

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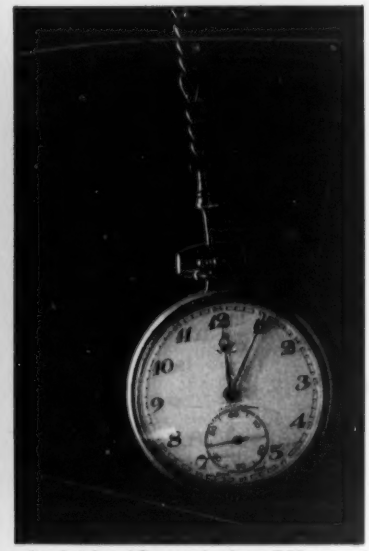

It only takes 1.5 seconds after a DS3 channel fails for damage to set in at a local office. But DS3 cross-connects can be called on to quickly detect the culprit and modify network connections, thereby minimizing damage. Cover art by Don Sparks, The Image Bank

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The plain truth about ISDN

ISDN may not be the messiah some optimists claim it to be, but it definitely will change the way we work and live in the 21st century

CHARLES FOSKETT

Pessimists claim that ISDN is the acronym for "I simply don't know." Optimists claim that the integrated services digital network is the solution to all modern communications problems and that it will be a revolutionary force that will affect the way we work, communicate and live in the next century. Skeptics argue that facilities and services provided by ISDN are already available from other sources at a lower cost.

Realists know that the truth lies somewhere in between.

To understand how and why ISDN will succeed in the years to come requires an understanding of the general forces driving ISDN development and the specific needs it fills. Such understanding also requires familiarity with available ISDN platforms, the range of ISDN products and a knowledge of how products and services can be distributed.

The Communication Revolution

Several major economic forces are driving the communications revolution. First, deregulation has spurred creativity and entrepreneurship in U.S. telecommunications. Hundreds of telcos and third-party providers compete for consumers' attention, with access to every level of the network.

Such open market competition will continue to make services affordable for more people and create incentives for companies to develop service enhancements and new products.

The second major force is demographic. The American work force is shrinking and becoming increasingly segmented—by age, skills and training, and vocational interest. The dwindling labor force is a net result of the "graying" of the American population.

The emergence of single-parent and working-couple families has changed family buying patterns. Working family members have no time or energy to shop, which has led to a surge in mail-order and telephone-based buying. This situation has created a need for innovative, telephone-based order-entry and order-fulfillment processes, which has heightened demand for customer premises equipment and network time.

For businesses, increased travel costs have sparked interest in cost-efficient conferencing and document transfer. On a wider scale, the globalization of the market economy has stimulated demand for global communications. The skyrocketing use of facsimile machines and a growing reliance on voice links and electronic mail testifies to this need.

Although economic forces have created the climate for change, they cannot create specific product demand. ISDN products must meet specific market needs.

First, ISDN must provide voice, data and image integration on the same connection. The technology must allow voice communication and the simultaneous ability to transfer files and screens from workstation to workstation or from workstation to host.

Second, ISDN loops must permit local station access to network data such as calling party name and number and to other local or remote information systems operating from mainframe hosts or local area networks. Third, besides providing standard electron-

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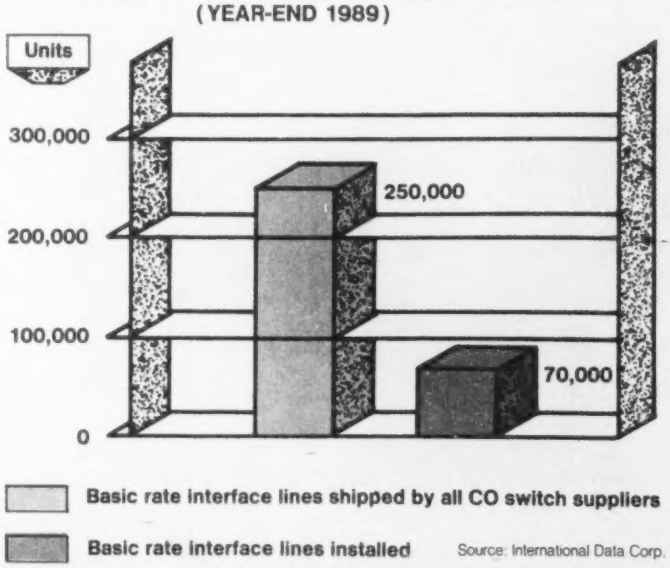
FIGURE 1 ISDN LINES SHIPPED OR INSTALLED (YEAR-END 1989)



The Plain Truth *continued*

dows would provide the additional advantage of offering voice, data and telephony control while simultaneously executing any word processing, spreadsheet or database application.

The Desktop

ISDN capability can translate into improved performance for an office worker. With an ISDN-compatible workstation, a manager can first listen to voice-mail messages from Europe phoned in overnight. As the manager sits down to work on a spreadsheet, an incoming call alert flashes on a small window on the PC screen.

After checking the caller's number, the manager can choose to answer the call or let it bounce to a voice mailbox. During a conversation, the manager can send files to the caller. If there are any questions about the files, a conference call can be set up with additional participants.

If the manager has to leave the office early, the workstation can be programmed to deliver a prerecorded voice message and accompanying charts to 15 people in overseas offices that evening.

The technology for such applications is already on the market, although a complete ISDN infrastructure has not yet been developed. Figure 1 shows the number of ISDN lines shipped or installed by the end of last year. In April, NCR became the first major PC vendor to introduce an ISDN workstation, while other vendors such as Vadis Corp., ICI and Hayes plan to announce or have announced ISDN personal computer terminal adapters.

Of course, ISDN cannot work as envisioned unless a true network emerges. In the past two years, some PBX manufacturers, communications providers and CPE vendors have offered switch and network ISDN capability. As this trend continues, the value of ISDN services will increase geometrically. The availability of equipment and network connectivity of platforms are indispensable to the demonstration of ISDN's cost efficiencies and its value to users.

Just as essential is the rapid endorsement of ISDN equipment distribution organizations. Installers, system suppliers and service networks must move further up the learning curve to better understand and promote ISDN capabilities.

The Benefits

Desktop ISDN will profoundly alter the structure of many industry segments. New automated communications capabilities will increase worker productivity and revenues for businesses and individuals involved in order entry, financial transactions and information distribution, as well as provide a sorely needed service for customers.

A great deal of work remains to be done before ISDN turns pessimists and skeptics into optimistic and enthusiastic supporters. But manufacturers that can rapidly market equipment to simplify multimedia communications will be the long-term winners. T

Charles Foskett is President of Natural MicroSystems Corp., Natick, Mass.

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